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July 29, 2016

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: CS Docket No. 97-80 (Commercial Availability of Navigation Devices)

Dear Ms. Dortch:

In its Second Report and Order in CS Docket No. 97-80,¹ the Commission directed certain cable operators to file periodically with the Commission “reports detailing CableCARD deployment and support.” The Commission noted that the “cable operators may file separate reports or a joint report.” As a matter of convenience, NCTA has compiled the individual company reports and is submitting them as attachments to this letter. Should the Commission have questions about any of these reports, please contact me and I will ensure that the questions are forwarded to the appropriate person at the relevant company for a response.

Respectfully submitted,

/s/ Neal M. Goldberg

Neal M. Goldberg

cc: Brendan Murray
Julie Kearney

¹ *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Second Report and Order, 20 FCC Rcd 6794 (2005).

Cablevision: FCC CableCARD Report - Q22016

CableCARD technology, which enables digital televisions to display encrypted programming, has been available to 100% of Cablevision customers since July 1, 2004. The installation and service of CableCARD is a routine practice and has been fully incorporated into the business. As with all the technical service issues, each occurrence is logged into an automated database for escalation and resolution.

1.	Current Number of CableCARD Subscribers	Current Number of CableCARD Subscribers	23,864	
		Deployed	35,190	
		Deployed Per Household	1.47	
2.	Number of CableCARDS in Inventory	25,189		
3.	How are CableCARDS Deployed	Customers can visit a Cablevision Optimum Store for self-installation of M-CableCARDS in their DCR CableCARD-compatible devices		
		Professional Installation		
4.	Percentage of Installations	Professional Installations	39%	594
		Customer Self-Installations	61%	927
5.	Average Number of Truck Rolls to Install a CableCARD	1.0		
6.	Monthly Lease Rate for CableCARD	\$2.00		
7.	Average Installation Cost (If applicable)	Professional Installation Fee	\$39.95	
8.	Number of Problems Encountered with CableCARDS (Installation and Post Installation)	2,154	Resolved on the phone with Standard troubleshooting	90%
			Resolved with a technician visit	10%
9.	Of the problems encountered, please list how they were resolved (Ex. TV Firmware upgrade)	Host DCR TV Issues(Samples)	<ul style="list-style-type: none"> • Problem Description: CableCARD does not bind with the host - Swap the CableCARD • Occurs During: Installation • Resolution: The technician will first unbind the CableCARD and install/bind another CableCARD. In some instances, the customer may need to contact the host TV manufacturer for a patch to be sent out for the specific host TV, or arrange for a professional visit by the manufacturer's technician. 	
			<ul style="list-style-type: none"> • Problem Description: Pixelation on most digital channels • Occurs During: Post-Installation • Resolution: Replace the service drop or components to verify signal levels are within specification or customers may need to contact the manufacturer directly to have Certified Technician perform a service call to install new hardware in the DCR TV Chassis. 	
			<ul style="list-style-type: none"> • Problem Description: DCR TV missing premium channels • Occurs During: Post-Installation • Resolution: Perform a "reboot" by removing the CableCARD and turning the DCR TV off. Channels are usually restored. 	

If the technician is unable to complete the installation due to technical issues, the technician is required to record the reason(s) why the install was not completed and the work order remains open. At the customer's request, a follow-up visit is conducted to further troubleshoot the problem and/or install a second (new) CableCARD. At this visit, additional personnel may accompany the technician to provide enhanced technical support. If a customer is unable to activate their equipment due to interoperability issue, Cablevision will contact the CE manufacturer to define the issue, resolve the problem and once again offer the customer the CableCARD installation.

The data (fix codes) collected from the problem are analyzed by the operations and engineering departments to determine if there are any systematic issues contributing to the CableCARD technology not functioning properly on the network.

Cablevision has also undertaken significant steps to pro-actively work with all the major CE-manufacturers to conduct the interoperability testing in our (single) test laboratory before any problems are experienced in the field.

Charter Communications¹
FCC CableCARD Reporting
April 1, 2016 to June 30, 2016

1. Current number of CableCARDS:

The total number of CableCARDS in service through June 30, 2016 is 56,703.

2. Provide the number of CableCARDS in inventory:

Motorola Multistream	24,050
Motorola Standard	1,219
SA Multistream	3,998
SA Standard	30
Total	29,297

3. How are CableCARDS placed in service?

Customers may self-install or request a professional installation.

4. Whether service calls are required for all CableCARD installations?

Service calls are not required for CableCARD installations.

5. Average number of truck rolls to install a CableCARD?

The average number of truck rolls to install a CableCARD (*i.e.*, the initial truck roll and any truck rolls within 30 days from the date of installation) through June 30 was 1.0.

6. Monthly lease rate for a CableCARD?

The monthly lease for a CableCARD is \$2.00.

7. Average installation cost of a CableCARD (if applicable):

The average cost for a professional installation is \$49.99.

¹ This report contains information for the legacy cable systems of Charter Communications. A separate report is being filed for the Time Warner Cable legacy cable systems. Starting with the report for the third quarter of 2016, Charter will file a consolidated report for the merged company.

8. Process for resolving CableCARD trouble calls:

Customers with a CableCARD problem are directed to call the Charter customer service number. Customer Service Representatives (“CSRs”) are trained about the features and benefits of CableCARDs, just as they are trained on any other Charter product offering. Some CableCARD calls are forwarded to the Advanced Services Team, whose members have more training and expertise on troubleshooting such calls. If the problem cannot be resolved over the phone, the CSR places a service order, which is then fulfilled by the cable installers and technicians. Charter maintains a record of any service calls for which a technician is dispatched.

Should a local cable installer or technician encounter a CableCARD problem, he/she reports such problem to his/her supervisor and the local technical support group. If the problem is not resolved at the local level, it is then escalated to corporate engineering or billing. If there appears to be a host problem, Charter has a designated member of its engineering department contact and place a report with the consumer electronics vendor or with the host manufacturer to resolve the issue as appropriate.

9. Reported problems associated with CableCARDs and how they were resolved:

With the exception of the below-listed issue, CableCARD problems encountered this quarter were routine installation issues. Network problems were resolved at the time of installation through Charter’s standard troubleshooting processes. Charter will continue to troubleshoot and resolve problems occurring with various makes and models of digital television hosts as they arise.

The illustrative problem with CableCARD installation and resolution for this quarter is listed below.

REGION(S)	ISSUE	RESOLUTION	HOST MFGR.
Various	Customers were unable to tune channels or channels were missing with particular host devices.	Problems were resolved by either swapping the CableCARD or repairing the host devices with the CableCARDs.	Various

Comcast
FCC CableCARD Report
4/1/16 – 6/30/16

Current Number of CableCARDS installed in active customer homes 329,213

Number of CableCARDS in Inventory 247,491

How are CableCARDS deployed: Customers may self-install (either visiting an Xfinity store/service center to pick up the CableCARD or calling Comcast to request the CableCARD be shipped directly to an address of their choice and perform self-activation of their CableCARD) or request a professional installation by a technician.

Total CableCARD New Installs 4,932

Number of Installs - Truck Rolls 2,202

Percentage of Installs - Truck Rolls 45%

Number of Installs - Self Installs 2,730

Percentage of Installs - Self Installs 55%

Average Number of Truck Rolls to Install a CableCARD 1.03

Monthly Lease Rate for Initial CableCARD \$0.00

Monthly Lease Rate for Additional CableCARD in the Same Device \$1.24

Average Installation Cost \$33.02

Process for Resolving CableCARD Problems

Comcast provides its customers with multiple methods to resolve problems with their CableCARD. Customers can call into Comcast's CableCARD support line (877-405-2298) to obtain a CableCARD and for all CableCARD activation, repair, and/or billing questions. This number is also displayed on the CableCARD information screen that is presented during CableCARD activation or troubleshooting on most CableCARD devices. Customers can also call into Comcast's customer service number (1-800-XFINITY) or initiate an online chat session with Customer Service Representatives ("CSRs") that are trained to handle questions or problems with CableCARDS.

Examples of Specific Issues and Resolutions

CableCARD technical and billing problems were related to configuration issues which caused installation and/or activation issues (e.g., incorrect CableCARD host information provided by customer). These problems were resolved by Comcast CSRs.

Cox Communications FCC CableCARD Reporting
4/1/2016 through 6/30/16

1. The number of Residential CableCARDS in service:

Cox TOTAL: 67,281
Cisco Total: 34,798
Moto Total: 32,483

2. General availability of CableCARDS:

Total CableCARDS available:

- a. Please provide an indication of supply availability for CISCO and Motorola CableCARDS. 26,867
Cisco CableCARDS: 14,772
Moto CableCARDS: 12,095

*The above numbers only include inventory available in our billing system and inventory currently assigned to FSRs. It does not include inventory assigned to subscriber accounts, inventory pending disposition or repair, etc.

3. How cards are placed in service?

A professional installation or self install.

4. Whether service calls are required for all CableCARD installations?

No. Self install is an option.

5. Average number of truck rolls to install a CableCARD?

The average number of truck rolls needed to install a CableCARD includes the initial truck roll for the install itself and any truck rolls required within 30 days of the install.

The average number of truck rolls to install a CableCARD was: 1.12

6. Monthly price charged for a CableCARD?

The average monthly rental for a CableCARD is \$1.99

7. Average installation cost of a CableCARD if applicable?

- a. What is the service charge to the subscriber for the installation?

The standard cost for a professional installation is \$50, (excluding discounts)

8. Problems encountered in deploying CableCARDS and how problems are resolved?

CableCARD Problems

- none

9. Process in place for resolving existing and newly discovered CableCARD implementation problems:

For any CableCARD issues encountered by a subscriber, Cox follows a prescribed troubleshooting process. If the troubleshooting resolves the issue, no further action is taken. If the troubleshooting procedures do not correct the issue, the issue is escalated to one or more of the following personnel within the system: (i) the Digital test desk; (ii) the IT group, and/or; (iii) the system's DAC or DNCS administrator. If none of the foregoing is able to resolve the issue, a problem form is completed and sent to corporate engineering. The problem form

Cox Communications FCC CableCARD Reporting
4/1/2016 through 6/30/16

collects specific details about the problem and alerts the engineering team to the relevant issues. Corporate engineering then follows up on the issue, contacting all of the necessary parties (including the CE manufacturers) until the issue is resolved.

In addition, Cox maintains an intranet site containing information about CableCARDS and specific issue updates. Cox Customer Support, Field Service, and Field Service Support also may use this site to review troubleshooting guidelines or details from CE manufacturers.

The DAC and DNCS administrators in each system also have direct connections with ATL operations and engineering to escalate any issues that require immediate assistance.

In Q4 2012, Cox added the role of Regional CableCARD Liaison to the CableCARD support process. A Liaison is appointed within each region to oversee all CableCARD support, troubleshooting/escalation issues, training, product updates and communications. The Liaisons make sure CableCARD issues are resolved according to established troubleshooting and escalation procedures in a timely manner. They function as a liaison between all local and corporate engineering, customer service, supply chain, etc. and work closely with a newly appointed corporate CableCARD Product Manager in Customer Care.

Time Warner Cable¹
FCC CableCARD™ Status Report
4/1/2016 – 7/31/2016

Current number of CableCARDS activated: **98,931**

Current number of unique CableCARD customers: **72,139**

Number of CableCARDS available in inventory: **82,611**

How are CableCARDS deployed? **Service appointment or self-installation**

Percentage of installs: **Service Appointment: 45%**
 Self-Install: 55%

Average number of truck rolls to install a CableCARD: **1.0**

Monthly lease rate for CableCARD: **\$2.40**

What is the average installation cost? **\$30.00**

What is your process in resolving existing and newly discovered CableCARD implementation problems?

The central CableCARD support desk serves as the lead point of contact for customers or employee CableCARD issues, and will shepherd an issue until resolution.

Customers with a CableCARD problem are directed to call the TWC CableCARD Support Desk whose members are specifically trained on troubleshooting such calls. If the problem cannot be resolved over the phone, a service call will be scheduled.

Should a local cable installer or technician encounter a CableCARD problem, he/she reports such problem to his/her supervisor and the local technical support group for escalation to the Support desk. The Support desk will engage corporate engineering or billing as needed. If there appears to be a host problem a designated member of the Support desk or Engineering department will contact and place a report with

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the consumer electronics vendor or host manufacturer to resolve the issue as appropriate.

Problems encountered with CableCARDS and their resolution

CableCARD problems encountered this quarter were routine installation issues. Issues reported were customers having problems tuning to some/all channels. This is typically resolved by re-pairing the HOST/CableCARD or in some circumstances swapping the CableCARD.